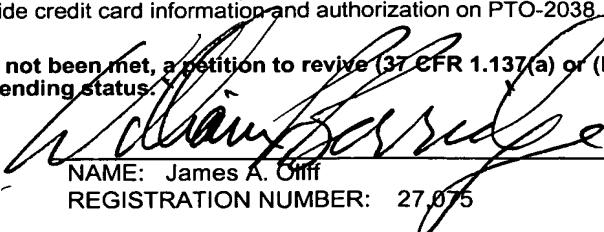
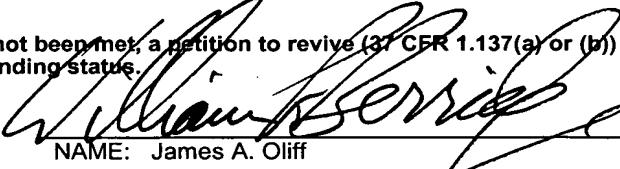


|   |  |  |
|---|--|--|
| FORM PTO-1390<br>(REV. 01-2003) US DEPARTMENT OF COMMERCE PATENT & TRADEMARK OFFICE   |  | ATTORNEY'S DOCKET NUMBER<br>129197   |
| <b>TRANSMITTAL LETTER TO THE UNITED STATES<br/>DESIGNATED/ELECTED OFFICE (DO/EO/US)<br/>CONCERNING A FILING UNDER 35 U.S.C. 371</b>   |  | U.S. APPLICATION NO. (If known, see 37 CFR 1.5)<br>New International Application<br><b>107591054</b> |
| INTERNATIONAL APPLICATION NO.<br>PCT/JP2005/004411  | INTERNATIONAL FILING DATE<br>March 8, 2005 | PRIORITY DATE CLAIMED<br>March 10, 2004  |
| TITLE OF INVENTION<br>GAS VANE PUMP, AND METHOD OF OPERATING THE PUMP   |  |  |
| APPLICANT(S) FOR DO/EO/US<br>Kohei ONO; Hiroyuki IKEMOTO; Junichi TANOUE; Ulrich HILTEMANN; Christoph HEIDEMEYER  |  |  |
| Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:   |  |  |
| <ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a filing under 35 U.S.C. 371.</li> <li>2. <input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a filing under 35 U.S.C. 371.</li> <li>3. <input type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.</li> <li>4. <input type="checkbox"/> The US has been elected (Article 31).</li> <li>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))             <ol style="list-style-type: none"> <li>a. <input checked="" type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> has been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</li> </ol> </li> <li>6. <input checked="" type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2))             <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> is attached hereto.</li> <li>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</li> <li>c. <input checked="" type="checkbox"/> The International Application was filed in English.</li> </ol> </li> <li>7. <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))             <ol style="list-style-type: none"> <li>a. <input checked="" type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> have been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</li> <li>d. <input type="checkbox"/> have not been made and will not be made.</li> </ol> </li> <li>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).</li> <li>9. <input type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).</li> <li>10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</li> </ol> |  |  |
| Items 11 to 20 below concern document(s) or information included:   |  |  |
| <ol style="list-style-type: none"> <li>11. <input checked="" type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.</li> <li>12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</li> <li>13. <input checked="" type="checkbox"/> A preliminary amendment.</li> <li>14. <input checked="" type="checkbox"/> An Application Data Sheet under 37 CFR 1.76.</li> <li>15. <input type="checkbox"/> A substitute specification.</li> <li>16. <input type="checkbox"/> A power of attorney and/or change of address letter.</li> <li>17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821 - 1.825.</li> <li>18. <input type="checkbox"/> A second copy of the published international application under 35 U.S.C. 154(d)(4).</li> <li>19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).</li> <li>20. <input checked="" type="checkbox"/> The International Search Report is attached to the Information Disclosure Statement.</li> </ol>   |  |  |

IAP9 Rec'd PCT/PTO 29 AUG 2005

|  |  |   |            |                           |  |
|--|--|---|------------|---------------------------|--|
| U.S. APPLICATION NO. (If known, see 37 CFR 1.5)<br>New U.S. Patent Application<br><b>10/591,034</b>  | INTERNATIONAL APPLICATION NO.<br>PCT/JP2005/004411       | ATTORNEY'S DOCKET NUMBER<br>129197      |            |                           |  |
| 21. <input checked="" type="checkbox"/> The following fees are submitted:  |  | <b>CALCULATIONS</b> <b>PTO USE ONLY</b> |            |                           |  |
| <b>BASIC NATIONAL FEE (37 CFR 1.492(a)):</b> ..... \$ 300.00   |  | \$300.00                                |            |                           |  |
| <b>SEARCH FEE (37 CFR 1.492(b)(1)-(3)):</b>  |  | \$400.00                                |            |                           |  |
| International preliminary examination report or written opinion prepared by the USPTO as IPEA or ISA and favorable as to novelty, inventive step, and industrial applicability for all claims presented in the application entering the national phase ..... \$ 0.00 |  |   |            |                           |  |
| International search fee (37 CFR 1.445(a)(2)) paid to USPTO as ISA ..... \$ 100.00   |  |   |            |                           |  |
| International search report provided to USPTO no later than the time at which the search fee is paid ..... \$ 400.00   |  |   |            |                           |  |
| All situations not provided for above ..... \$ 500.00  |  |   |            |                           |  |
| <b>EXAMINATION FEE (37 CFR 1.492(c)(1)-(2)):</b>   |  | \$200.00                                |            |                           |  |
| International preliminary examination report or written opinion prepared by the USPTO as IPEA or ISA and favorable as to novelty, inventive step, and industrial applicability for all claims presented in the application entering the national phase ..... \$ 0.00 |  |   |            |                           |  |
| All situations not provided for above ..... \$ 200.00  |  |   |            |                           |  |
| Surcharge of <b>\$130.00</b> for furnishing the search fee, the examination fee or the oath or declaration after the date of commencement of the national phase (37 CFR 1.492(h)).   |  | \$                                      |            |                           |  |
| APPLICATION SIZE FEE<br>Total pages 40 - 100 =   | ÷ 50   | = †                                     | x 250 =    | \$                        |  |
| †round up to next integer  |  |   |            |                           |  |
| CLAIMS   | NUMBER FILED   | NUMBER EXTRA                            | RATE       | \$                        |  |
| TOTAL CLAIMS   | 16 - 20  | =                                       | x 50.00 =  | \$                        |  |
| INDEPENDENT CLAIMS   | 3 - 3  | =                                       | x 200.00 = | \$                        |  |
| MULTIPLE DEPENDENT CLAIM(S)(if applicable)   |  |   | + 360.00 = | \$                        |  |
| <b>TOTAL OF ABOVE CALCULATIONS =</b>   |  |   |            | \$900.00                  |  |
| <input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by ½ .  |  |   |            | \$                        |  |
| <b>SUBTOTAL =</b>  |  |   |            | \$                        |  |
| Processing fee of <b>\$130.00</b> for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(i)).   |  |   |            | \$                        |  |
| <b>TOTAL NATIONAL FEE =</b>  |  |   |            | \$900.00                  |  |
| Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). <b>\$40.00</b> per property +  |  |   |            | \$                        |  |
| <b>TOTAL FEES ENCLOSED =</b>   |  |   |            | \$900.00                  |  |
|  |  |   |            | Amount to be refunded: \$ |  |
|  |  |   |            | charged: \$               |  |
| a. <input checked="" type="checkbox"/> Check No. 183603 in the amount of \$900.00 to cover the above fees is enclosed.   |  |   |            |                           |  |
| b. <input type="checkbox"/> Please charge my Deposit Account No. _____ in the amount of \$_____ to cover the above fees. A duplicate copy of this sheet is enclosed.   |  |   |            |                           |  |
| c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 15-0461. A duplicate copy of this sheet is enclosed.                              |  |   |            |                           |  |
| d. <input type="checkbox"/> Fees are to be charged to a credit card. <b>WARNING:</b> Information on this form may become public. <b>Credit card information should not be included on this form.</b> Provide credit card information and authorization on PTO-2038   |  |   |            |                           |  |
| <b>NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.</b>  |  |   |            |                           |  |
| SEND ALL CORRESPONDENCE TO:<br>OLIFF & BERRIDGE, PLC<br>Customer Number: 25944   |  |   |            |                           |  |
| Date <u>August 29, 2006</u>  | NAME: James A. Oliff<br>REGISTRATION NUMBER: 27,075      |   |            |                           |  |
|  | NAME: William P. Berridge<br>REGISTRATION NUMBER: 30,024 |   |            |                           |  |

|  |  |   |            |                           |  |
|--|--|---|------------|---------------------------|--|
| U.S. APPLICATION NO. if known; see 37 C.F.R. 1.5)<br><b>107591854</b>  | INTERNATIONAL APPLICATION NO.<br>PCT/JP2005/004411 | ATTORNEYS DOCKET NUMBER<br>129197       |            |                           |  |
| 21. <input checked="" type="checkbox"/> The following fees are submitted:  |  | <b>CALCULATIONS</b> <b>PTO USE ONLY</b> |            |                           |  |
| <b>BASIC NATIONAL FEE (37 CFR 1.492(a)):</b> ..... \$ 300.00   |  | \$300.00                                |            |                           |  |
| <b>SEARCH FEE (37 CFR 1.492(b)(1)-(3)):</b>  |  | \$400.00                                |            |                           |  |
| International preliminary examination report or written opinion prepared by the USPTO as IPEA or ISA and favorable as to novelty, inventive step, and industrial applicability for all claims presented in the application entering the national phase ..... \$ 0.00 |  |   |            |                           |  |
| International search fee (37 CFR 1.445(a)(2)) paid to USPTO as ISA ..... \$ 100.00   |  |   |            |                           |  |
| International search report provided to USPTO no later than the time at which the search fee is paid ..... \$ 400.00   |  |   |            |                           |  |
| All situations not provided for above ..... \$ 500.00  |  |   |            |                           |  |
| <b>EXAMINATION FEE (37 CFR 1.492(c)(1)-(2)):</b>   |  | \$200.00                                |            |                           |  |
| International preliminary examination report or written opinion prepared by the USPTO as IPEA or ISA and favorable as to novelty, inventive step, and industrial applicability for all claims presented in the application entering the national phase ..... \$ 0.00 |  |   |            |                           |  |
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| Surcharge of <b>\$130.00</b> for furnishing the search fee, the examination fee or the oath or declaration after the date of commencement of the national phase (37 CFR 1.492(h)).   |  | \$                                      |            |                           |  |
| APPLICATION SIZE FEE<br>Total pages 40 - 100 =   | ÷ 50   | = †                                     | × 250 =    | \$                        |  |
| †round up to next integer  |  |   |            |                           |  |
| CLAIMS   | NUMBER FILED                                       | NUMBER EXTRA                            | RATE       | \$                        |  |
| TOTAL CLAIMS   | 16 - 20  | =                                       | × 50.00 =  | \$                        |  |
| INDEPENDENT CLAIMS   | 3 - 3  | =                                       | × 200.00 = | \$                        |  |
| MULTIPLE DEPENDENT CLAIM(S)(if applicable)   |  |   | + 360.00 = | \$                        |  |
| <b>TOTAL OF ABOVE CALCULATIONS</b> =   |  |   |            | \$900.00                  |  |
| <input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by ½.   |  |   |            | \$                        |  |
| <b>SUBTOTAL</b> =  |  |   |            | \$                        |  |
| Processing fee of <b>\$130.00</b> for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(i)).   |  |   |            | \$                        |  |
| <b>TOTAL NATIONAL FEE</b> =  |  |   |            | \$900.00                  |  |
| Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). <b>\$40.00</b> per property +  |  |   |            | \$                        |  |
| <b>TOTAL FEES ENCLOSED</b> =   |  |   |            | \$900.00                  |  |
|  |  |   |            | Amount to be refunded: \$ |  |
|  |  |   |            | charged: \$               |  |
| a. <input checked="" type="checkbox"/> Check No. 183603 in the amount of \$900.00 to cover the above fees is enclosed.   |  |   |            |                           |  |
| b. <input type="checkbox"/> Please charge my Deposit Account No. _____ in the amount of \$_____ to cover the above fees. A duplicate copy of this sheet is enclosed.   |  |   |            |                           |  |
| c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 15-0461. A duplicate copy of this sheet is enclosed.                              |  |   |            |                           |  |
| d. <input type="checkbox"/> Fees are to be charged to a credit card. <b>WARNING:</b> Information on this form may become public. <b>Credit card information should not be included on this form.</b> Provide credit card information and authorization on PTO-2038.  |  |   |            |                           |  |
| <b>NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.</b>  |  |   |            |                           |  |
| SEND ALL CORRESPONDENCE TO:<br>OLIFF & BERRIDGE, PLC<br>Customer Number: 25944   |  |   |            |                           | NAME: James A. Oliff<br>REGISTRATION NUMBER: 27,075                                  |
| Date <u>August 29, 2006</u>  |  |   |            |                           | NAME: William P. Berridge<br>REGISTRATION NUMBER: 30,024                             |

**10/591 034**  
**IAP9 Rec'd PCT/PTO 29 AUG 2006**

**PATENT APPLICATION**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Kohei ONO et al.

New U.S. Patent Application

Filed: August 29, 2006

Docket No.: 129197

For: GAS VANE PUMP, AND METHOD OF OPERATING THE PUMP

**SUBMISSION OF THE AMENDMENTS  
UNDER PCT ARTICLE 19 (35 USC 371(c)(3))**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Attached hereto are the amendments of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)). The attached material replaces the claims.

Respectfully submitted,

James A. Oliff  
Registration No. 27,075

William P. Berridge  
Registration No. 30,024

JAO:WPB/jdb

Date: August 29, 2006

**OLIFF & BERRIDGE, PLC**  
**P.O. Box 19928**  
**Alexandria, Virginia 22320**  
**Telephone: (703) 836-6400**

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| <b>DEPOSIT ACCOUNT USE<br/>AUTHORIZATION</b><br>Please grant any extension<br>necessary for entry;<br>Charge any fee due to our<br>Deposit Account No. 15-0461 |
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